

How do I determine which version of the firmware is running on the Myri-10G Network Adapter?

Model:

Myri 10 G (8A, 8B, and 8C) network adapters.

Software:

N/A

Operating System:

Supports the Linux, Windows, and FreeBSD Operating Systems.

Information:

***The following instructions only apply to **Myri10G 8A, 8B, 8C** network adapters. ***

At any given point, there is an active firmware running on the embedded NIC-SRAM. Out of reset, the first activefirmware is taken from the EEPROM and put into NIC_SRAM and controls the adapters for initialization purposes (pcie-negotiation, OS/BIOS configuration). Later when the drive (e.g. Myri10GE or DBL) is loaded, if some runtimefirmware is available in the **/lib/firmware** directory, the driver will switch the active firmware in the NIC-SRAM to that version. That's why there are two different firmware versions into play (one from EEPROM, and one from /lib/firmware). Or, in the **MYRI!) GE_BUILTIN_FW=1** case, from the **myri10ge*/firmware/*eth*h firmware** header files used by the driver at compile time.

To determine the version of the firmware stored in the EEPROM (not always the same as the **active/running firmware** (, you need to run a tool called **myri_info** available from the [Myri-10G Network Adapter Tool Kit](#) that we provide for the following OSes: Linux, FreeBSD, and Windows.

On Linux, untar the file, and run the command:

```
# myri-tools-<firmware-version>-linux/myri_info -v
```

On FreeBSD, untar the file, and run the command:

```
# myri-pcie-tool-<firmware-version>-freebsd/myri_info -v
```

On Windows, the self-extracting exe file will create a top-level directory:

```
cd \Program Files\myritool [ or \Program Files (x86)\myritool on 64bit systems]myri_info -v
```

Example of **Myri_info** output:

```
# ./bin/myri_info  
  
pci-dev at 46:00.0 vendor:product(rev)=14c1:0008(00)  
behind bridge root-port: 40:0e.0 10de:005d (x8.1/x8.1)
```

```

Myri-10G-PCIE-8A -- Link x8
  EEPROM String-spec:
    MAC=00:60:dd:47:76:a9
    SN=315632
    PWR=100
    PC=10G-PCIE-8AL-R
    PN=09-03365
    TAG=ze_tools-1_4_5_rc1

  EEPROM MCP, PRESENT, length = 169528, crc=0x8d1d3a8b
    ETH ::1.4.5 -P- 2006/08/22 16:02:21 myri10ge firmware
    Bundle: exec_len=136752, PCI-ROM-len = 32768
  Running MCP:
    ETH ::1.4.45 -- 2009/08/22 18:57:06 myri10ge firmware

```

Myri_info tells you which firmware is stored in the EEPROM and also tells you which firmware is currently active on the NIC (network adapter). Specifically:

The EEPROM firmware is the one after the **EEPROM MCP** line.

The currently active firmware is the one after the **Running MCP** line.

Further Details:

At boot, before the driver is loaded, **active and EEPROM firmware are the same**. After the driver has replaced the initial firmware with its own, **the Running MCP/firmware and EEPROM firmware will generally be different**.

***The **myri_info** also includes the pcie link-width in the second or third line (see below):

TAG= indicates the jtag-bytecode part of the EEPROM, and what was last programmed in the EEPROM.

For any given **TAG**, the jtag-bytecode and the **EEPROM MCP** constitute the “primary NIC-bootloader (and fallbackfirmware)”.

Lastly **Running MCP**, tells what is the currently active MCP (the MCP might come from either **EEPROM MCP** or the driver).

For instance, on a machine where MX is loaded, the last line of **myri_info** output look like:

```

# myri_info
..
Running MCP:
  MX10::1.2.0rc1cvs2006.05.18.04.00xxx@xxxx:/nfs/home/xxxx/tiki-cvs Tue
  Jun 6 04:54:03 EDT 2006

```

You can also see with **myri_info** whether an Etherboot/EFI/gPXE ROM part is included as part of **EEPROM MCP**, an etherboot-enabled eeprom will look like (the critical part is the presence of PCI-ROM-len):

```

..
EEPROM MCP, PRESENT, length = 169528, crc=0x8d1d3a8b
  ETH::1.4.5 -P- 2006/08/22 16:02:21 myri10ge firmware
  Bundle: exec_len=136752, PCI-ROM-len = 32768
Running MCP:
  ETH::1.4.45 -- 2009/08/22 18:57:06 myri10ge firmware

```

<u>Revision</u>	<u>Date</u>	<u>Change</u>
1	7/18/2016	Initial Draft

2	8/2/2016	Feedback

